

ABBOT'S WOOD – A HISTORY OF A WOODLAND AND ITS BUTTERFLIES

By M. PARSONS* and M. HADLEY**

Introduction

Abbot's Wood is about 6 miles inland from Eastbourne and just north of the South Downs (OS grid. ref. TQ5607). Although considerable changes have occurred within the woodlands boundaries, the site has always been well frequented by entomologists and hence has a well recorded entomological history. At the turn of the century the wood was a hive of activity, as reflected by the number of notes appearing in various journals such as the *Entomologist*, the *Entomologist's Record* and the *Entomologist's Monthly Magazine*. The wood is also mentioned in several local lists, notably Jenner (1883-1886), the *Victoria County History* (1905) & Adkin (1928). Recently however, the wood has not been the mecca it once was, comparatively few entomologists visit the site regularly, and very little published material is available. In 1983 the Nature Conservancy Council commissioned a butterfly survey of the site, the objectives being to note the status and distribution of the species present as well as harmful management practices, and to suggest suitable management proposals which would be beneficial to the woodlands species. An unpublished work by Salvage (Circa 1975) laid the background history of the woodland; this has been supplemented with the Forestry Commission's plans and recent 'compartment' histories, along with information gleaned from various articles. This paper relates the varying fortunes of the butterfly population to changes in land-use management practices.

The History of the Wood

Abbot's Wood was once part of the vast Saxon forest of Anderesweald which stretched along the south of England from Kent to Hampshire. By the time of Henry I, the woods then known as Lindhersse were given to Battle Abbey and overseen by the Abbot, hence Abbot's Wood. The woods remained part of this estate until dissolution under Henry VIII. There is evidence to suggest that the monks of the Abbey went to considerable trouble to drain their lands and ancient ditches and embankments are still present today.

Many medieval industries seem to have occurred in the wood.

* The Forge, Russells Green, Ninfield, East Sussex.

** 7 Beverington Close, Eastbourne, East Sussex.

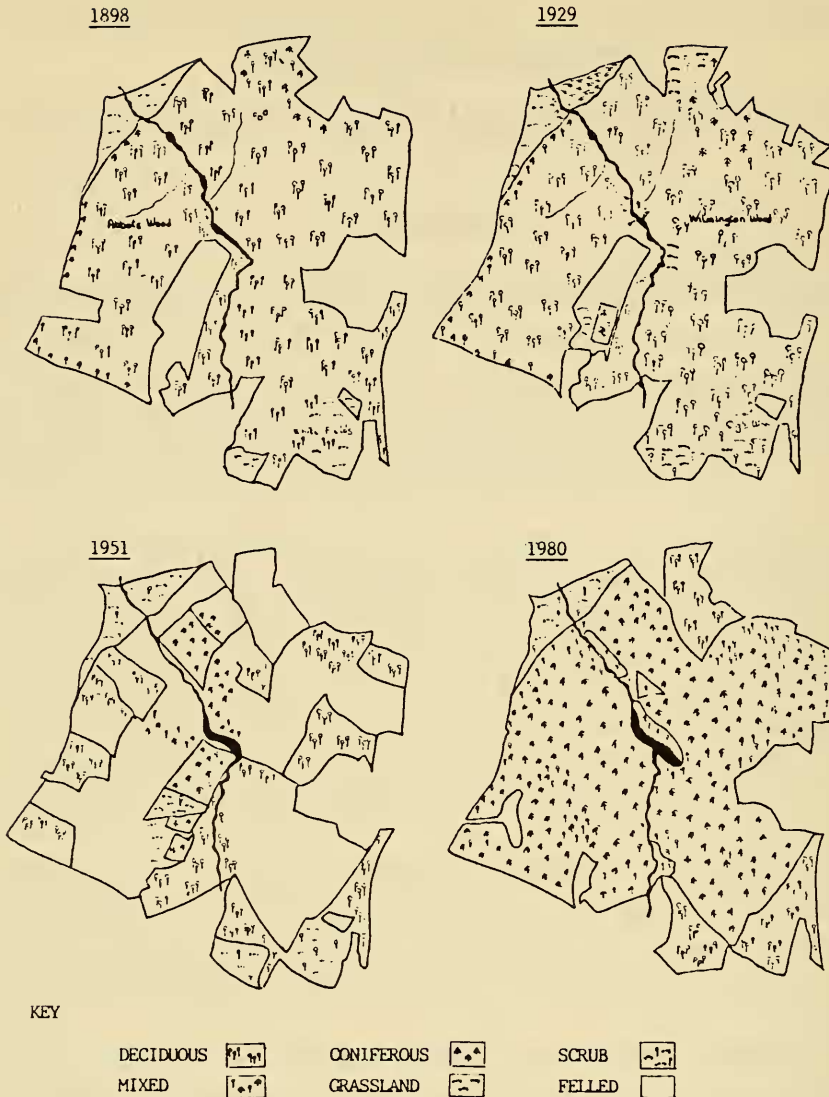


Fig. 1. Woodland changes 1898-1980.

There was an osier plantation until comparatively recent times, this might have provided baskets for a kiln known to have been in the area. There is also evidence of a mill near Robin Post Lane, as well as three fish ponds from which the lake probably originated, therefore the woods would have been the scene of considerable human activity. Farming has carried on around the woodland for sometime, and in 1883 the trees of White Fields were being cut down and cattle let on to the land. The woodlands became the property of the Chatsworth Estate and were leased out for several years. At this pre-war time it was a mixed wood of birch, hornbeam and gigantic oaks and beeches. The rides and paths twisted and turned to create a maze in which it was easy to get completely lost. Many wild flowers grew in profusion, several rare species occurring.

It was also renowned for its game, abundant bird life and of course its entomology, especially the butterflies, moths and beetles.

During World War 2 and for some years after, a dire need for timber and charcoal brought about the beginning of the end for the oaks and beeches. Felling commenced from about 1940. Around 1941 the wood was mainly a wild unkept area of scrub under sparse stag-headed oaks, and there were no walkable rides. The wood was more accessible on the east side with some fine oaks and coppiced sweet chestnuts still remaining. In preparation for 'D-Day' the wood became home for thousands of troops sheltering under the remaining trees. A wide strip was cleared of trees, levelled and prepared as a landing strip. Two large areas of Milton Hide were treated in a similar fashion though never used. In 1944 the first planting of conifers happened when the Chatsworth Estate planted a large open area with spruce, pine and larch. Most of the rest of the woodland was left to become a jungle. In 1949 new clearings were created by the felling of mature timber. The Forestry Commission acquired 880 acres in 1953 and commenced the task of reafforestation in 1954. This was at first with oaks, pines and other conifers, but latterly with just the conifers. In 1956 Milton Hide was burnt back as rabbits were thriving and causing problems to local farmers.

It has taken just thirty years to alter the once predominantly oak woodland to the coniferous forest of today. The vast drifts of primroses, anemones and bluebells that once covered the area are gone, the number of birds have declined as have the insects. It is interesting to note that Abbot's Wood was declared a Site of Special Interest in 1954 and was removed from the schedule in 1966.

The Butterflies

HESPERIIDAE: Of the six recorded species in the woodland five may still occur. *Thymelicus lineola* Ochs., (Essex skipper) and *T. sylvestris* Poda., (small skipper) are both locally common, the former has only been recorded since the late 1970's, probably overlooked before this time. *Ochlodes venata* Tur., (large skipper) and *Pyrgus malvae* L., (grizzled skipper) are apparently much scarcer than in former years and appear in low numbers. *Erynnis tages* L., (dingy skipper) may have disappeared and was last seen in 1975. The sixth species, *Hesperia comma* L., (silver-spotted skipper) has not been recorded since Dale (1879) who describes it as 'rare in the wood', not surprisingly as the nearest suitable habitat for this butterfly is several miles away.

PAPILIONIDAE: A single *Iphiclides podalirius* Scop., (scarce swallowtail) was noted in Robin Post Land, Bromley (1893).

PIERIDAE: *Pieris brassicae* L., (large white), *P. rapae* L., (small white) and *P. napi* Steph., (green-veined white) all occur in the woodland, although in earlier times a small form of *P. napi* Steph. apparently occurred, Jenner (1885). *Gonepteryx rhamni* L., (brimstone) flies in fair numbers in selective rides, as does *Anthocharis cardamines* Ver., (orange tip) which frequents more open areas beside the stream. *Leptidea sinapis* L., (wood white) seems to have occurred in the wood until 1878. Pratt (1981) concludes that the species disappeared from East Sussex at around that time. One later record from the Biological Records Centre cites a specimen seen in 1912, a possible vagrant or more likely an introduction. Migrant Pieridae include *Colias croceus* Geo., (clouded yellow) which is often recorded in favourable years, it was noted on the recent survey, Parsons (1983), including a single ab. *helice*. *C. hyale* L., (pale clouded yellow) was regarded as rare, Dale (1897), and has been recorded in the area recently, Pratt (*pers. comm.*). *Pontia daplidice* L., (bath white), although not strictly within the woodland boundary was seen in a lane leading to White Fields (1879). A second was seen at 'Hailsham' by Hillman (Pratt, 1981). *Aporia crataegi* L., (black-veined white) was noted as 'having occurred at Abbot's Wood' VCH (1905). A footnote by Goss, however, states that he had not seen the species since 1868.

LYCAENIDAE: Both *Callophrys rubi* L., (green hairstreak) and *Quercusia quercus* L., (purple hairstreak) still occur in the wood, the latter being more frequent. The only other hairstreak to have been recorded was *Strymonidia w-album* Knoch (white-letter hairstreak) last seen in 1944 (Biological Records Centre).

Lycaena phlaeas Fab., (small copper) is no longer the common insect once mentioned by Dale (1879) neither is *Polyommatus icarus* Rott., (common blue), which is now only locally common. *Celastrina argiolus* Ver., (holly blue) although present, has fluctuated greatly. Adkin (1901) states that it was 'unprecedentedly common', Parsons (1983) saw but five examples of the species.

The four remaining Lycaenids all seem to be casual visitors to the woodland. *Cupido minimus* Feuss., (small blue), Dale (1879), *Lysandra coridon* Poda, Dale (1879), Davys (1976, *pers. comm.*), and Parsons (1983), *Aricia agestis* D. & S. (brown argus) which appears at irregular intervals, all seem to be strays from nearby downland colonies. Lastly, *Cyaniris semiargus* Rott., (mazarine blue) a single specimen of which was captured by T. C. Hedley in White Fields in 1881 (Dynes, 1883).

NEMEOBIIDAE: *Hemaris lucina* L., (Duke of Burgundy fritillary) was noted as 'very rare' by early recorders, Adkin (1928) cites the

existence of a colony in the Eastbourne area, perhaps a vague reference to the woodland. Recent investigations, Pratt (*pers. comm.*), suggest this colony did not linger past 1945.

NYMPHALIDAE: Early authors regarded *Ladoga camilla* L., (white admiral) as a rarity although by the early twentieth century its fortunes were reversed and it became one of the most common of the woodlands butterflies, today it is only locally common. A species to be seen with certainty, according to Dale (1879), was *Apatura iris* L., (purple emperor), although Adkin (1928) stated that it had not been seen for many years. A singleton seen by Tomlin was noted by Adkin (1932). *Vanessa atalanta* L., (red admiral), *Cynthia cardui* L., (painted lady) and *Agrias urticae* L., (small tortoiseshell) have all been regularly recorded throughout the period, although only one *A. urticae* was noted on the 1983 survey.

Nymphalis polychloros L., (large tortoiseshell), once 'common' (1879), seemed to have become absent by the 1930's (Dale), a few individuals were subsequently seen, the last of these by Pepin (1962). *Nymphalis antiopa* L., (Camberwell beauty) is listed on the strength of a single record by Jenner (1885). *Inachis io* L., (peacock) is the most common nymphalid butterfly in the wood at the present time. Although not recorded until 1970 (Davys, *pers. comm.*) *Polygonia c-album* L., (comma) could have appeared in the wood in the 1930's at a time when there was a general resurgence of this species.

As a group, the fritillaries have suffered a serious decline with only three species recently recorded from the woodland, and all at low levels. *Boloria selene* D. and S., (small pearl-bordered fritillary) once a species of great profusion, was 'common', Alderson (1910), 'common in our woodlands', Adkin (1928), and Dyson (*pers. comm.*) mentions it as 'very common in one particular part of the wood in the 1950's. A dramatic decline has taken place however, with only a single specimen seen in 1983 (Parsons). Early workers also regarded *B. euphrosyne* L., (pearl-bordered fritillary) as common, this remained the case until a decline began in the 1960's, with the last record being in 1980 (Pratt, *pers. comm.*). Of the immigrant *Argynnis lathonia* L., (Queen of Spain fritillary) there has been a single reported sighting in White Fields, Dale (1879). Out of three species *A. aglaja* L., (dark green fritillary), *A. paphia* L., (silver washed fritillary) and *A. adippe* Ver., (high brown fritillary) the last mentioned was considered to be the most frequent, VCH (1905). It was soon to be regarded as scarcer than *A. paphia* L., Adkin (1928), and seems to have died out in the woodland in the 1940's or 1950's. *A. aglaja* L. was last seen in 1976, Pratt (*pers. comm.*) and *A. paphia*

was noted once on the survey in 1983 (Parsons). *Eurodryas aurinia* Rott., (marsh fritillary) seems to have been present around about 1892 when it was seen by several entomologists, but has not been seen since. *Mellicta athalia* Rott., (heath fritillary) has been re-introduced into the woodland more than any other butterfly, yet it was almost certainly resident until about 1918. Since that time numbers recorded fluctuated greatly. Mr. Pickett introduced a stock around the time of the Second World War, Dyson (*pers. comm.*). The species flourished briefly until its final demise sometime between 1956 and 1960.

SATYRIDAE: With the exclusion of *Hipparchia semele* L., (grayling) all seven members of this family recorded still occur. The casual records of *H. semele* L., were strays from nearby calcareous environs. *Pararge aegeria* But., (speckled wood) only seems to have been noted since the late nineteenth century, with a period of absence in the 1920's. *Lasiommata megera* L., (wall brown) still occurs, though in smaller numbers than before. A conspicuous satyrid that has declined in numbers is *Melanargia galathea* Ver., (marbled white), this is now confined to the Milton Hide area. *Pyronia tithonus* Ver., (gatekeeper) and *Maniola jurtina* Linn., (meadow brown) are still common, especially the former. *Coenonympha pamphilus* L., (small heath) has been found throughout the recording period restricted to the grassier areas. *Aphantopus hyperantus* L., (ringlet) is still very common in some parts of the woodland.

Discussion

As can be seen from Table I, 51 species have been noted, a remarkable total. However, immigrant and casual species account for 14 of these, leaving 37 species which have at some time or another bred in the woodland. At the time of writing 28 species may be breeding in the woodland, 4 of these are very scarce. The elm feeding *S. w-album* disappeared around the time of the Second World War. No elm occurs within the woodland today and it seems likely that any that did were cut down during clearance around this time. *N. polychloros* probably died out from the wood around the turn of the century coinciding with its general decline in the county, any subsequent sightings probably represent migrants. The reasons behind the loss of *Apatura iris* are less clear, although habitat loss in White Fields during the late 1880's, would have had serious implications as the wood was the stronghold for the butterfly.

In the 1940's and '50's about thirty species could be recorded within the boundary of the wood, some species of fritillary were

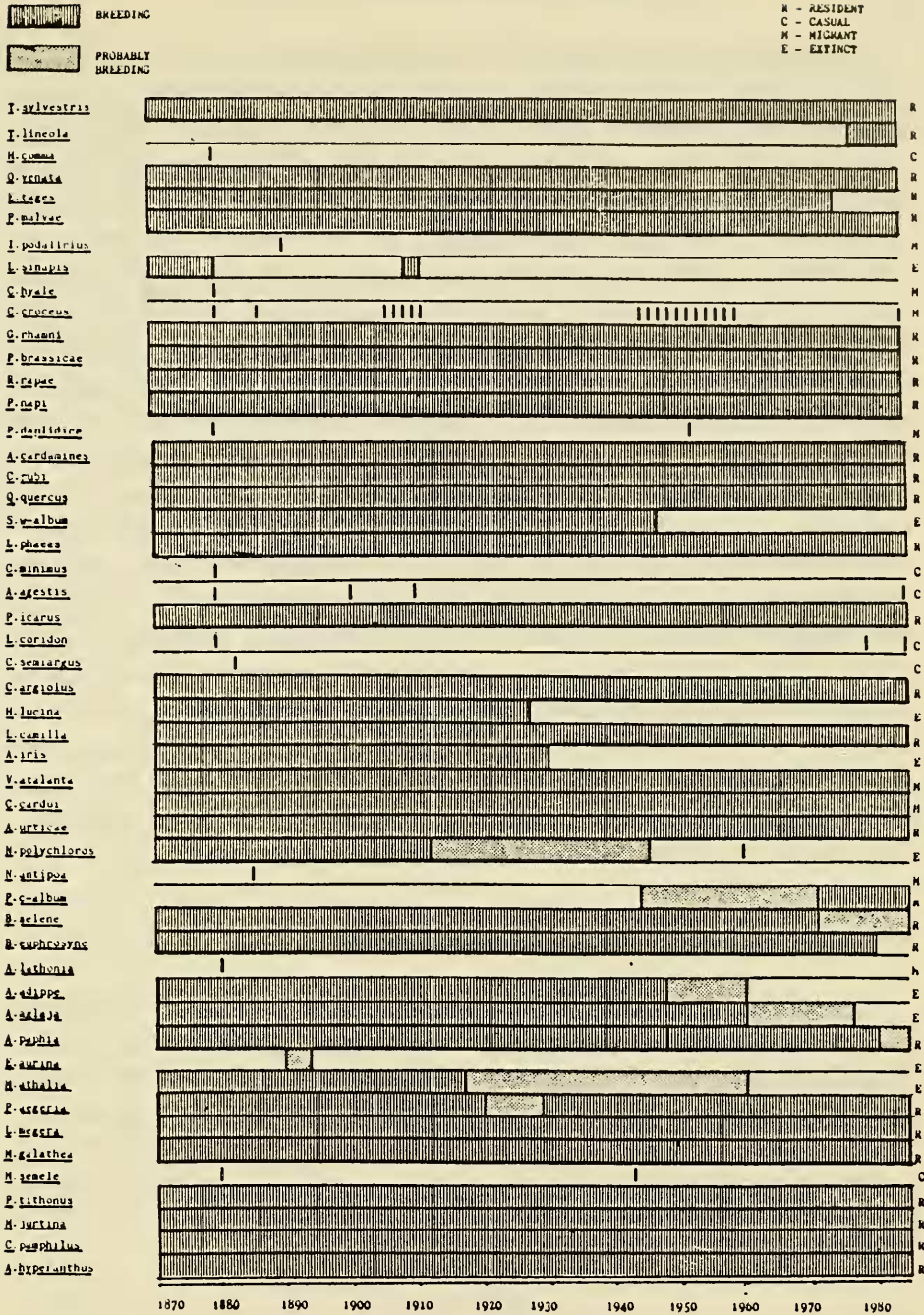


Table 1. Historical occurrence of Species in Abbot's Wood 1870-1984.

common, notably *B. selene* and *B. euphrosyne*, this seemingly coincided with clear-felling at this time. These activities would have created a large area of suitable habitat resulting in a population explosion. However, as the clear-felled areas were replanted with conifers and the crop began to mature, shade would have increased and the available habitat would have shrunk, this coupled to the lack of suitable glades would explain the serious decline in the fritillaries.

A. adippe was the first to die out, soon followed by the final demise of *M. athalia*, after several successful re-introductions, *A. aglaja* lingered on until the mid 1970's. *B. selene* and *B. euphrosyne* underwent declines, although they may well still survive in the woodland. The decline of *A. paphia* was probably linked to the clearance of the large oaks required by the females for successful oviposition — there are few left standing today. As the conifers grew up, the ride edges would also have become more shaded rendering them unsuitable for *P. malvae* and *E. tages*. Because the initial replanting took place at the same time throughout the woodland, there would have been few suitable places where the diversity of the woodlands butterflies could have been maintained. There are few rides and glades and those that remain are not wide enough or do not have developed edges to support the species previously present.

As a result of the survey in 1983, a management plan was produced in liaison with a local Forestry Commission official. Taking into account financial constraints it is hoped that three areas are to revert, with management, to coppice with standards. These will be linked by widening specific rides and the opening up of ride intersections to form useful glades. It remains to be seen whether these recommendations will be fully implemented, although it should be possible to balance commercial timber production whilst enhancing the populations of butterflies.

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EILEMA CANIOLA HUBN. (THE HOARY FOOTMAN) IN KENT — On the night of 23rd/24th August 1984 a specimen of *E. caniola* was captured in an actinic trap at Greatstone, Kent. According to Chalmers-Hunt (*The Butterflies and Moths of Kent* 3: 235) this represents the fifth confirmed record of this species for Kent this century. Although a number of *Autographa gamma* L. were taken on the same night, there were no other notable immigrants seen. My thanks are due to Bernard Skinner for confirming the identity of this moth. A. P. CLANCY, Delhi Cottage, Dungeness, Kent, TN29 9NE.

COPRIS LUNARIS L. (COL.: SCARABAEIDAE) ON GUERNSEY — At about 12.05 a.m. on the night of June 14th/15th 1986 a male specimen of this rare dung beetle flew to my m.v. trap at Two Wells Barn, in the Vale district of Guernsey. According to notes very kindly provided by Mr. L. Jessop of the British Museum (Natural History) this species has not been on mainland Britain since 1955, but is said to be widespread in France. I cannot find any previous reference to this species on Guernsey. My trap was sited in agricultural land, and there were tethered cattle in close proximity. *C. lunaris* excavates deep brood tunnels beneath cow or horse dung. The light, sandy soils of Vale especially on the nearby L'Ancrese Common could, I am sure, be searched profitably for the surface "spoil heaps" that indicate the underground activities of this interesting beetle. — M. D. BRYAN, Keeper of Natural History, Birmingham Museum.